

REMARKS

Pursuant to the present amendment, claims 1-50 have been canceled as they are directed to a non-elected invention that was the subject of a previous restriction requirement. Applicants specifically reserve the right to pursue the subject matter defined by the canceled claims in a later filed application should they so desire.

Claims 51-52, 54-62, and 65 were amended to clarify the language of the claims. Claims 51, 56, and 61 were also amended to include the feature of approving the authentication at the microcontroller in the bridge.

Claims 51-65 are pending in the present application. In the Office Action, claims 51-65 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Flyntz (U.S. Patent No. 6,389,542) in view of Angelo (U.S. Patent No. 5,949,882). The Examiner's rejections are respectfully traversed.

Flyntz describes a smart card reader that grants or denies access to a restricted security subsystem based on identification information entered into the smart card reader by a computer user. See Flyntz, col. 2, ll. 52-57. Flyntz also describes the use of a microcontroller 32 that is separate from both the smart card reader and the smart card. See Flyntz, col. 15, ll. 5-49. However, as admitted by the Examiner, Flyntz does not describe or suggest receiving a request for an authentication at a microcontroller included in a bridge, as set forth in independent claims 51, 56, and 61. Applicant respectfully submits that Flyntz also fails to describe or suggest that the request is received from a bus external to the bridge, as set forth in independent claims 51, 56, and 61. Still further, Flyntz also fails to teach or suggest that the authentication is approved at the microcontroller in the bridge.

Angelo describes a computer system that uses a password and an external encryption algorithm to allow access to secured computer resources. The computer system (S) described by Angelo includes a CPU/memory subsystem 100 that is connected to a PCI bus (P) by a PCI-ISA bridge 130. The CPU/memory subsystem 100 includes a microprocessor 102. See Angelo, col. 4, line 48-col. 5, line 4 and Figure 1.

As the Examiner well knows, to establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). As discussed above, and as admitted by the Examiner, Flyntz does not describe or suggest receiving a request for an authentication at a microcontroller included in a bridge, as set forth in independent claims 51, 56, and 61. Flyntz also fails to describe or suggest that the request is received from a bus external to the bridge and that the authentication is approved at the microcontroller, as set forth in independent claims 51, 56, and 61. Angelo fails to remedy the fundamental deficiencies of Flyntz, the Examiner's primary reference.

The Office Action asserts that Angelo teaches a microcontroller included in a bridge by referencing the bridge 130 of Figure 1. However, Angelo does not mention any such microcontroller included in the bridge or any type of security processing occurring in the bridge. There is no suggestion in Angelo that the bridge 130 is anything but a conventional bridge that merely converts signals formatted in accordance with the PCI protocol to other supported protocols (ISA, ISE, *etc.*). Such conventional bridges do not include microcontrollers. In fact, the entirety of the security functionality mentioned in Angelo is performed by the microprocessor 102, as indicated at col. 7, line 17, "In the first step 202 of the POWER-ON sequence 200 the computer system S begins executing from the BIOS ROM." In the passages

that follow, the control of the security processing is always conducted by the computer system S. Accordingly, none of the security processing control occurs in the bridge 130, but rather the bridge merely acts as a conduit for the computer system S to communicate with the flash ROM 154 to load the BIOS code and to communicate with the token 188. Also see col. 8, line 10, “After the password has been entered, the encryption process is then performed by the computer system S.” Hence, the bridge 130 of Angelo does not include a microcontroller, as asserted by the Office Action, and, furthermore, the bridge 130 does not approve the authentication. Furthermore, Angelo does not teach or suggest approving the authentication at the microcontroller.

Accordingly, Applicant respectfully submits that even if the cited references were combined in the manner suggested by the Examiner, the cited references would still fail to teach or suggest all the limitations set forth in the pending claims. A recent Federal Circuit case emphasizes that, in an obviousness situation, the prior art must disclose each and every element of the claimed invention, and that any motivation to combine or modify the prior art must be based upon a suggestion in the prior art. *In re Lee*, 61 U.S.P.Q.2d 143 (Fed. Cir. 2002).

The Advisory Action asserts that Applicants improperly attack the references individually. To the contrary, Applicants attack the references individually to the extent that they do not teach what the Examiner asserts they teach. The Office Action asserts that Angelo teaches a microcontroller. To the contrary, Angelo only teaches a conventional bridge. There is no teaching or suggestion in Angelo to use a microcontroller in the bridge. Moreover, the **combination** of Flyntz and Angelo fails to teach or suggest all features of the present invention. The microcontroller of Flyntz acts as an intermediary between the system and a security device for enabling the system. The microcontroller does not respond to external authentication

requests received over a bus. The microcontroller of Flyntz is not even coupled to an external bus. Angelo fails to correct these defects. Angelo does not teach any usage for a microcontroller. All the security functionality of Angelo is performed by the CPU. Hence, the combination fails to teach the use of a microcontroller in a bridge to authenticate external requests. The Office Action attempts to blindly substitute the microcontroller of Flyntz for the conventional bridge of Angelo. There is simply no support for this combination that does not improperly rely on hindsight based on Applicants' teachings. The microcontroller of Flyntz performs no bridging functions, so there is absolutely no basis for combining Flyntz with Angelo.

Applicant submits that the Examiner has therefore fail to make a *prima facie* case that the present invention is obvious over the prior art of record and requests that the Examiner's rejections of claims 51-65 under 35 U.S.C. § 103(a) be withdrawn.

For at least the aforementioned reasons, it is respectfully submitted that all pending claims are in condition for immediate allowance. The Examiner is invited to contact the undersigned attorney at (713) 934-4070 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

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